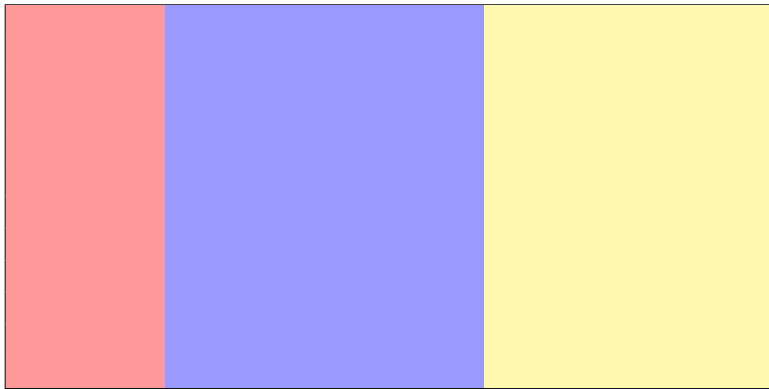


$$X = [X_1 \ X_2 \ X_3] \in \mathbb{R}^{n \times (p_1 + p_2 + p_3)}$$


 \approx

$$U \in \mathbb{R}^{n \times r}$$

 \times

$$V^T \in \mathbb{R}^{r \times (p_1 + p_2 + p_3)}$$

